Vol. 67, No. 7 Arnold AFB, Tenn. **April 6, 2020**

Critical national defense mission keeps AEDC open amid pandemic

By Kathy Jacobsen AEDC Public Affairs

Ground testing for critical Department of Defense projects will continue at Arnold Engineering Development Complex while mitigating the risks during the Coronavirus pandemic.

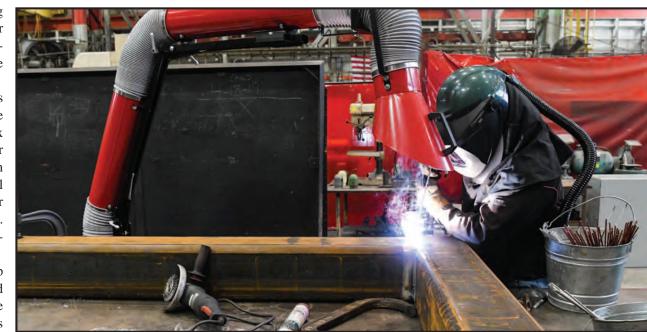
That means some employees will stay on-thejob and the Complex will remain open. Tunnel 9 in Maryland temporarily halted operations for three days last week due to the governor's directive to stay at home. There are more than 447 confirmed CO-VID-19 cases in Montgomery County where Tunnel 9 is located, but the facility is already up and running

again after reconfiguring the control room and other spaces to enforce social distancing and other protective measures.

NASA limited access to the National Full-Scale Aerodynamics Complex at Ames Research Center in California, to mission essential only personnel after the governor's order to shelter in place at home. AEDC manages and operates the facility at Ames.

The 704th Test Group at Holloman, Kirtland and Wright-Patterson Air Force Bases and White Sands Missile Range, N.M., confollowing the personal pro-

See CRITICAL, page 3



Chris Easterly, an ironworker, welds a joint on a C-1 pipe support stand April 1 in the Model and Machine tinues select tests while Shop at Arnold Air Force Base, Tenn. Easterly is wearing a welding helmet with a powered air purifying respirator (PAPR) and a hood, which provides protection from smoke and fumes. The PAPR is not required for welding non-stainless steel, but is being explored as a risk mitigation option for when craftsworkers need to be closer than six feet apart to complete the task. (U.S. Air Force photo by Jill Pickett)

Capability improvements at transonic wind tunnel leads to approximately \$200,000 in savings annually

By Deidre Moon

AEDC Public Affairs

An annual savings of close to \$200,000 is expected after the facility checkouts of the Arnold **Engineering Development** Complex 16-foot Transonic Wind Tunnel, or 16T, at Arnold Air Force Base last September.

By leveraging previous upgrades to the Propulsion Wind Tunnel facility's main compressor drive, the 16T wind tunnel can be operated utilizing lower power consumption, according to Tyler McCamey, a program manager for Test Investment Planning and Programming funded capital improvement programs at Arnold.

"Flight team members

checkout of conditions of lightbulbs. 16T, and during this test, the PWT main drive compressor was being used in a way that was not originally possible," McCamey said. "But a Computational Fluid Dynamics analysis and a study of the compressor curves predicted that lower compressor speeds, combined with optimal blade angle settings, could safely and more efficiently generate test conditions for the 16T core operating envelope, where 85 percent of the tunnel's testing occurs."

Depending on the desired tunnel conditions, the test demonstrated an instantaneous savings of up to 10 megawatts, or

Ron Lutz and Douglas the equivalent power of Miller were overseeing a running 100,000 100-watt

> "Being the largest single-user on the TVA (Tennessee Valley Authority) grid, the team was able to demonstrate a way to be a better steward of power resources without any compromise in capability," Mc-Camey said.

Another way Flight team members determined they could improve test efficiency is by better maintaining air-velocity conditions during sweeps of wind tunnel model position. Precise air-velocity control is a crucial element of providing the highest quality data to customers. The Flight team determined that augment-

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Tyler McCamey, a program manager, right, Ethan Jobe, a plant operations engineer, and Shelby Moorman, an electrical systems engineer, converse in the Main Drive building of the Arnold Engineering Development Complex (AEDC) Propulsion Wind Tunnel Facility Feb. 7 at Arnold Air Force Base. AEDC team members determined a new configuration of the motors to power the compressors, resulting in a significant power savings. (U.S. Air Force photo by

Arnold FES team rescues five people trapped 300 feet underground at J-4

By Deidre Moon

AEDC Public Affairs

Saturdays at Arnold Air Force Base are typically quieter days, with most of the workforce at home spending the weekends with their families.

But on Saturday, Feb. 29, it wasn't so quiet for the Arnold Fire and Emergency Services crew.

A call came into the FES station around 11:30 a.m., informing the team that five craftsmen were trapped in an elevator at the bottom of the J-4 Rocket Motor Test Facility.

According to Assistant Fire Chief Tom Lombard,

performing maintenance work, diverting water and cleaning underneath the test facility to keep piping clear and operational. After completing their task, the group was making their way out of the facility using the elevator when the control system failed to respond. The individual monitoring the work from the ground level called FES when the other members radioed they were stuck.

"The safety lock showed that the door to the elevator was open, and as a safety measure elevators won't move if the doors are per-

the craftsmen had been ceived to be open," Lombard said.

Upon getting the call, Lombard and his team responded immediately and began to develop rescue

"The best method, or 'Plan A' in a case such as this, is to wait for the elevator repairman to see if they can get the elevator functioning properly to get the people out that way," he said.

While waiting for the elevator repairman, the FES rescue team set out their equipment and began building the complex rig-

See **RESCUE**, page 3



Brian Barnes, a rescue technician with Arnold Fire and Emergency Services, makes the almost 300-foot vertical descent into the J-4 silo to assist in retrieving the five Arnold Engineering Development Complex craftsmen on Feb. 29 at Arnold Air Force Base. (U.S. Air Force photo)

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Col. Jeffrey Geraghty Commander

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- Ethics. We are uncompromising in our integrity, honesty, and fairness. Safety & Health. We are relentless in keep ing people safe from harm, and we provide a
- safe and healthy work environment. Security. We are disciplined and vigilant in protecting sensitive AEDC information and ensuring system integrity to support national security and our customers
- Excellence. We thrive on challenge, accomplishment, and mission suc Quality. We are passionate about doing our
- work right the first time. People. We have a mission-focused, inclusive workforce who have a diverse skill set, are committed to success, demonstrate inno-
- vation and have a can do attitude. • Culture. Our team is proud of our diversity, inclusiveness, and collaborative work environment. We are proud of what we do and
- how we do it. Relationships. We build positive, long-term business relationships through trust, respect,
- and collaboration. Innovation. We overcome challenges through creativity, perseverance, technology, and flexibility. We actively seek to continu-
- ally improve Sustainability. We plan and act for the long vironment.

Pursuing Mission Excellence: Striving to be "Second to None"

By Lt. Col. Adam Quick

Chief, Space and Missiles Test Branch

"Pursue Mission Excellence," "Invest in our People," "Improve and Sustain the Complex;" the three priorities laid out by AEDC leadership "to prove the systems required to meet the demands of the National Defense Strategy' and put us on a path towards "Second to None."

What does mission excellence mean for a professional Developmental Test & Evaluation (DT&E) organization? How does an organization balance the demands of today's mission while investing and preparing to execute tomorrow's? As Space and Missiles internalized the AEDC priorities, the Branch leadership team developed three principles to guide decisions: Workforce before Facilities; Quality before Capacity; Capacity before New Capability.

People execute the mission; people solve problems! Take care of the Workforce before Facilities.

Trust the workforce to execute the mission, identify issues and define requirements. Give them opportunities to experiment with innovative solutions utilizing the resources they already have. (Every acquisition professional remembers non-material solutions are preferred.)

A trained workforce has a lead-time, requires maintenance and has a sustainment tail, just like facilities. Make sure to align the development of a workforce with a new capability. After all, a test capability includes both people and infrastructure. AEDC manner; the fundamental prin-document and communicate their

can't deliver mission excellence ciples of Crew Resource Managewithout its workforce.

AEDC, through the Test of execution. Branches, Squadrons and Operating Locations, is responsible for developing and maintaining a professional DT&E workforce. Professionally executed DT&E is critical to acquiring systems that meet the demands of the National Defense Strategy.

Space and Missiles focuses on four workforce competencies (technical, operational, safety and security) to achieve mission excellence. Not just competence, but excellence resides in the workforce throughout AEDC, and team with unity of purpose and mission focus.

foundation of the AEDC DT&E workforce. It is essential to performing the functions of T&E: during test execution. maturing system designs, managing risks, identifying and resolving deficiencies, assisting in reduction of unintended cost increases, and ensuring systems are operationally mission capable. AEDC T&E professionals provide the technical competence for both test facility/environment and system-under-test to design T&E programs that provide decision for test programs. quality information.

dual meaning for professional on Quality before Capacity.

facilities and creating operationally relevant environments for the systems-under-test. It includes executing ground and flight test in a safe, secure, effective and efficient

ment; and the mechanical aspects

The second, operational competence, is extrapolating results to the ability to deliver warfighting capability. This requires a workforce knowledgeable in the system's operational concepts and environments. This knowledge is gained through close collaboration with our mission partners.

Technical and operational competence are the foundations of safety competence. Understanding how the system interacts with the test environment and predicting system response to test condimust be integrated into a cohesive tions allows the workforce to tailor risk management tools to accomplish the mission. The DT&E Technical competence is the workforce must then be trained and qualified to employ those safety principles and requirements

> Security competence cannot be overstated. Safeguarding the information required to plan and execute tests, as well as the data produced during testing, is essential to successful mission execution. The ability to identify, create, handle, process, store and disseminate information in a secure and timely manner is vital support

A T&E workforce that meets Operational competence has the four competencies must focus

Defining and documenting the The first is employment of expectations is a critical step for delivering mission excellence. The good habits and process discipline developed with a quality focus will increase efficiency. The workforce should understand,

definition of quality and the metrics used to capture status. Let them determine which processes, tools, documentation and training gaps exist. Leadership should provide the resources to close the gaps. The easiest way to increase capacity is to make sure we deliver the right information the

Once we're routinely delivering quality T&E, make sure we're executing at the required Capacity before New Capability.

Strive to be the expert, not just competent, in today's mission. That focus reveals constraints and limitations in test capabilities for future systems. Establishing requirements traceability provides the foundation for defining, planning and growing into tomorrow's mission. Common commercial economic terms like time value of money, return on investment and lost opportunity should be tailored to our mission and acquisition processes. Communicating what matters when, knowing how and when we "break even," and knowing what we're sacrificing are key to informing leadership about our future test capabilities.

These three principles guide the decisions within Space and Missiles. They directly tie to the AEDC priorities, and put us on the path to mission excellence. When we put the workforce first, they'll deliver. They'll earn the National trust by proving AEDC can deliver the DT&E required for warfighting capabilities Sec-

AEDC Strategy 2020: A disciplined approach

By Lt. Col. Joshua Goins

Staff Judge Advocate, AEDC

Upon arriving at Arnold Air Force Base last summer, I received the mission brief that most of you have seen.

Until that point, I had no real understanding of what goes on within AEDC on a day-to-day basis. In retrospect, I didn't get it that much better after the brief. It wasn't until I was lucky enough to be invited to join Col. Jeffrey Geraghty and Chief Master Sgt. Robert Heckman on several site visits across Arnold AFB that I was able to comprehend why AEDC is so vital to the security of our nation. The few trips I've made thus far have made a few things clear to me.

ing place. Each of my visits has left me in awe of the highly skilled uniformed, civilian and civilian disciplinary system. What I'm doing right now driving this contractor workforce. Likewise, I mean by discipline is self-con- organization closer to meeting I have been blown away by the trol, single-mindedness, or one the needs of the National Defense work that is being done by these dedicated Americans.

I have been fortunate enough to be present during the discussion, sibility to our nation, each and ev- what I want?

impossible for a non-engineer like myself to conceptualize in the abstract, simply putting eyes on a small sliver of AEDC operations has driven home for me that the testing being conducted across the Complex is truly at the cutting edge of technology and is *critical* to the nation's continued technological edge on the battlefield.

These experiences have made hour of every day. me realize that meeting the dehave been given will require discipline from every member of the AEDC team, whether they be strategy, focus.

or presentation, of several clas- ery one of us must maintain a lato create and maintain a testing complex that is second to none, and thereby ensure that our fighting forces meet the same standard. Maintaining this laser focus will require disciplined thought and action. It will require every individual to put aside his or her personal desires and issues, and it will require that we do this every

The key to success is ensuring mands of the National Defense that the activities of the individual Strategy with the resources we move the entire AEDC team closer to the goal of mission excellence, rather than causing unnecessary friction between the moving parts. an active duty service member Each of us should question every or a contractor employee, an en- action we take during duty hours gineer or a member of the Wing – every email that we send, every First, Arnold is a truly amaz- staff. Discipline here doesn't mean meeting that we schedule, every enforcement of the Uniform Code issue that we raise to our superviof Military Justice or use of the sors – and ask ourselves, is what of the hallmarks of the 2020 Strategy? Or, alternatively, are the actions I'm engaging in right To meet this awesome respon- now, focused more about me and

To be clear, this doesn't resified tests. Though it was nearly ser focus on the actions necessary quire us to completely check our personalities at the door, or to suffer unnecessary hardships in the name of the collective good. It does, though, require us to suffer perceived slights or blows to our egos, the correction of which will not advance the mission, create a safe working environment, or serve important policy goals such as diversity and inclusion; for we can't afford to waste time and energy on activities that are not fully synchronized with the mission of proving the superiority of the systems that are required to ensure our National Defense Strategy succeeds.

Paraphrasing Lt. Col. George Washington's message to his Virginia Regiment captains in a July 1757 letter – discipline makes small numbers formidable. Though the task before us is daunting and our resources scarce, if we engage in self-discipline in order to ensure unity of purpose in all endeavors, I am confident that this great team will succeed in creating a Complex that is truly Second to None.

Smoking Policy

- The following revised Arnold AFB smoking policy is effective immediately and applies to all individuals on Arnold AFB.
- Traditional Tobacco products (e.g. cigars and cigarettes):
- a. Smoking is permitted solely in Designated Tobacco Areas (DTAs) identified by designated signage. If no signage exists, smoking is not permitted in that area. It is the responsibility of all smokers to keep DTAs clean of cigarette butts.
- b. Tobacco use on the Arnold AFB Golf Course is permitted, but discouraged based on the health hazards of tobacco use and secondhand smoke. No smoking is permitted within 50 feet of golf course buildings except in the approved DTA.
- c. Smoking in government-owned/leased vehicles is strictly prohibited. Personnel are allowed to smoke in their personal vehicles at any time; however, at no time will personnel discard cigarette butts outside their vehicle. d. For government employees, the fact that a person smokes has no bearing on the number of breaks they may take. Breaks should be taken in accordance with the current supervisory and personnel policies that
- afford all employees the same break opportunities consistent with good work practices and accomplishment of the mission. Smokeless Tobacco products (e.g. snuff and dip): Smokeless tobacco products are not to be restricted to DTAs. Smokeless tobacco use will be permitted in all
- Electronic Cigarettes (also known as "e-cigs"):
- workplace areas (inside and out) subject to reasonable safety and sanitary conditions. Specifically, containers of tobacco waste product, including sealed containers, must not be left unattended or disposed of in trash receptacles. Users of smokeless tobacco must flush tobacco waste down the toilet.
- Pursuant to Air Force Instruction (AFI) 40-102, Tobacco Free Living, e-cigs are considered to be equivalent to tobacco products; however, e-cigs are not restricted to DTAs and are allowed to be used outdoors at a minimum distance of 25 feet from building entry/egress points. (This policy is dated July 27, 2016)

Action Line

I believe in free and open communications with our Team AEDC employees, and that's why we have the Action Line available. People can use the Action Line to clear up rumors, ask questions, suggest ideas on improvements, enter complaints or get other issues off their chests.

The Action Line has been expanded to include an option for your ideas, comments, or suggestions on the AcqDemo personnel system. Simply call the normal x6000 commander's action line. You will then be prompted to select option 1 for the Commander's Action Line or Option 2 for the AcqDemo line. They can access the Action Line via the AEDC intranet home page and by calling 931-454-6000.

Although the Action Line is always available, the best and fastest way to get things resolved is by using your chain of command or by contacting the organization directly involved. I encourage everyone to go that route first, then if the situation isn't made right, give us a chance.

Col. Jeffrey Geraghty **AEDC Commander**

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tection guidelines at their respective bases. Other geographically separated Bases are likewise complying with local guidelines.

"I want to thank each of you for the efforts you've put forth to continue the mission to the best of your ability throughout this time of rapidly changing guidance and restrictions," said AEDC Commander Col. Jeffrey Geraghty. "AEDC leaders at every level have done an excellent job preparing to mitigate health risks while enabling us to continue our important national defense mission for the long term. Those of you who get the mission done have acted with con-

these changes."

A memo released by units at Eglin, Edwards, DOD Acquisition Chief message, Geraghty stated Peterson and Hill Air Force Ellen Lord cites a White House statement from March 19 referring to the defense industry as part of the nation's critical infrastructure. Defense companies "are expected to maintain their normal work schedules," even as state and local governments tell private companies to close.

"We need your support and dedication in these trying times to ensure the security of this Nation," Lord said. "I understand that this national emergency presents a challenge and

fidence and poise amidst all and accomplishments of the national security mission."

> In a recent Facebook his three priorities for the base – in priority order:

- 1. Protect the health
- of the workforce; 2. Execute the mission;
- 3. Take care of each other, to include yourselves.

As more people started to contract the virus nationwide, one of Geraghty's first acts was maximizing telework and encouraging defense contractors to do the same whenever possible. There were also travel restrictions and changes we are dedicated to working at the gate. Security perclosely with you to ensure sonnel ask a series of

lowed. Anyone considered to 10 people or less and high risk or who has been many meetings are held in a virus hot spot is de- using other methods of nied access. Deliveries communication such as are also more challenging, telephone, virtual meetto include food services and items needed for test support. However, base is building models and leadership has devised methods to substantially mitigate the already small health risk imposed by such deliveries.

Another measure to protect the workforce involves personal protective equipment in situations where contractors around the social distancing is not attainable. Additional proprocess mandated by the they are to him and to the

onto Arnold AFB is al- son meetings are limited ings, etc.

> The AEDC Model Shop making modifications to test areas; security and fire personnel, power and water personnel are on the base and craft personnel who are conducting tests. The Operations Center is staffed with both government and clock 24-7.

Col. Geraghty said he tection includes complet- wants the people of AEDC ing an enhanced screening to know how important the safety of the workforce questions before entry wing commander. In-per- nation. "I'm communicat- ForceBase/.

ing your value to national defense when I contact city, county and state officials. The military. government civilian and contractor workforce at AEDC really is second to none. That is why I have implemented the strictest guidelines in the Command to reduce the risk to the health of the workforce.

All DOD facilities each day with the engineers remain at a minimum Health Protection Condition Charlie.

> For the most up-todate information about COVID-19 at Arnold AFB, be sure to check https://www.arnold.af.mil/ coronavirus and the AEDC Facebook page http://www. facebook.com/ArnoldAir-

IMPROVEMENTS from page 1

ing the system used to control air-velocity will increase the sweep-rate of model position Ledbetter said. "Data collected without the need to slow down during the facility checkouts movement or repeat test points where the air velocity was not within tolerances. This improves productivity and reduces cost for repeat points.

Sid Ledbetter, an Instrumentation, Data and Controls engineer, and Sara Rhoades, a Facility Technology engineer, have been studying the predictive control of valves to help 16T stay on condition between changes to the test models.

is already being employed by oth-

er AEDC facilities, shows promise of doing the same for 16T," will help our team in finalizing a predicative control algorithm that we will be able to deploy in the future."

With the same intent of maintaining test conditions, AEDC controls engineers Drew Owen and Davy Ruehling took advantage of the same 16T capabilities tests to tune the load commutated inverter, or LCI, and found that the baseline tuning was good.

"The LCI is part of the system "This control technique, which that controls the variable speed drive motors of the compressor,"

Ruehling said. "By monitoring the LCI, it was determined that the lower speeds used for efficient compressor operation also resulted in near unity power factor, or when reactive power is reduced to zero. Operation away from unity power factor has historically resulted in about \$101,000 annually in TVA penalties."

Shelby Moorman, an electrical design engineer, is currently writing a new LCI control system specification that will use the knowledge gained through this recent testing to assure the upgraded system will avoid these penalties and improve upon the ability to operate at lower speeds.

Additionally, multiple test agendas were combined into an executed matrix of test points to minimize the cost of the testing on the facilities. Brian Edinger, a test project engineer, spearheaded this effort, along with engineers Joe Capps, Ethan Jobe and John Wright.

"This group found that some actions to improve power efficiency may compete with controllability and vice-versa, and the experiments improved understanding of these interactions." McCamey said. "The facility characterization gained through the experiments will help test operations save the customer money, while also maximizing the amount of data they can collect within the program budgets on future tests."

Because collecting data for test customers is a central mission of AEDC, McCamey explained that finding time to run the facilities for the sole purpose of discovering improvements can be difficult.

"The expense can occasionally be justified if there is an expected payback in improved capability or efficiency, and this certainly was the case for this cadre of experiments by the Test Operations group at PWT," he said.

RESCUE from page 1

ging systems they would use to I'm proud of the work done, of retrieve the individuals if needed.

"Once the elevator repairman arrived and determined he couldn't get the elevator operating, then we put our next plan Sam Teat, one of our rescue technicians, as the lead on the rescue and our guys went to work. All 15 responders on duty that day assisted in completing the rescue."

als stuck in the elevator sustained impromptu training exercise," he any injuries. Prior to getting the said. "Though the guys we were craftsmen out, the FES team called to rescue were nervous sent down bottles of water and about being taken up the 300

these depths, there are inherent risks," Lombard said. "But we were able to start the rigging at the ground level and bring the rope straight down the tunnel."

Brian Barnes, a rescue technician with Arnold FES, was the one tasked with making the almost 300-foot vertical descent variety of confined spaces," Lominto the J-4 silo to assist in bringing the five workers up.

was lowered to a platform at around the 150-foot mark to prowas hoisted.

"The team did fantastic," Lombard said.

"We will be debriefing so learned, but I couldn't be happier.

what we were able to accomplish and that no one was injured."

Teat added he was also impressed with the entire team.

"Everyone did a great job asinto action," Lombard said. "I put sisting, which made everything go really smoothly," he said.

Barnes agreed it went so well that the call felt like a training exercise.

"Because there were no medi-Luckily, none of the individu- cal emergencies, it seemed like an feet tunnel, we assured them that "To do a rescue like this, at we prepare for this type of thing every day. We tried to make them as comfortable with the process as possible."

> Of course, this was not the first time that the FES team has been called to a situation involving a confined space.

"Every day workers enter a bard said. "In preparation, we have confined space training and Firefighter Christopher Elsen exercises, and practice rigging exercises throughout the year."

On a regular basis, the FES vide a safety check as each person team members preincident plan each facility to become familiar with the layout should an emergency occur there.

Daryle Lopes, the chief of we can key in on some lessons Fire and Emergency Services,



On. Feb. 29, Arnold Fire and Emergency Service personnel use a rigging system to retrieve five Arnold Engineering Development Complex craftsmen from the bottom of the J-4 Rocket Motor Test Facility after the elevator control system failed to respond at Arnold Air Force Base. (U.S. Air Force photo)

commented on the rescue opera-

by at Arnold Fire are 'Be Safe, Be Prepared, Be Professional and Be Dedicated," he said. "The J-4 rescue was just one

more opportunity for us to serve the AEDC community in a time 'The values we seek to live of great need. I couldn't be more proud of the way the entire fire protection team puts our values to work on a daily basis."

Anyone in need of emergency assistance on base should first dial 911. If using a cell phone, the caller must inform the dispatcher that the call is coming from Arnold Air Force Base so that the call is transferred to FES.

Offices closed, activities canceled at Arnold AFB in response to coronavirus

By Bradley Hicks

AEDC Public Affairs

In response to the COVID-19 pandemic, officials at Arnold Air Force Base have moved to cancel activities and close offices and facilities across the base. These temporary changes have been imposed to limit the possible community transmission of the virus.

All Arnold AFB Services events and trips have been canceled through April. Base personnel are asked to avoid nonmission essential mass gatherings, parties, speaking events and other functions at this time.

Announced closures at this

time include:

- The Arnold AFB Medical Aid Station. Those requiring immediate medical assistance are asked to visit their nearest emergency room.
- The Arnold AFB Legal Office. The office will remain closed for an unknown duration legal assistance, tax appointments and general customer service assistance.
- The Wingo Inn is not accepting new reservations at this time. Outdoor Recreation is also closed. This includes the FamCamp and Crockett Cove, which are not accepting new reservations at this time.
- The Mulligan's Grill restaurant

- Course. Both the Arnold Lakeside Center and the Gossick Leadership Center.
- The barbershop located in the Arnold AFB Administration & Engineering Building.
- Café 100 in the A&E Building

Altered schedules/operations:

The Arnold AFB Fitness Center weight room will remain open, but only from 6-10 a.m. Monday through Friday for active duty military. The Arnold AFB Fitness Center sauna and showers, as well as the fitness room located on the 4th floor of the A&E Building, are closed.

located at the Arnold Golf • The Arnold Golf Course will remain open only for scheduled tee times Friday through Sunday. The course will be closed Monday through Thursday.

> The Defense Commissary Agency and Base Exchange at Arnold AFB remain open.

> Arnold AFB personnel have been asked to adhere to the travel restrictions previously issued by the Department of Defense. U.S. Deputy Secretary of Defense David L. Norquist approved travel restrictions for service members, DOD civilians and their families assigned to DOD rounding areas within the U.S.

and its territories. The restriction halts all domestic travel, including permanent Change of Station and Temporary Duty. It also pauses civilian hiring at DOD installations and components for persons who do not reside within the hiring entity's local commuting area.

Service members will be authorized local leave only, following Service guidelines.

The guidance approved by Norquist took effect on March 16 and continues through May 11.

This list will be updated installations, facilities and sur- as additional announcements

Coffee County EMA encourages Arnold AFB personnel to sign up for Hyper-Reach

By Deidre Moon

AEDC Public Affairs

The Coffee County Emergency Management Agency has established a way to communicate emergency alerts to residents in the local area using the Hyper-Reach Reverse 911 program.

chief of Emergency Management at Arnold Air Force Base, this program allows county governments to reach those registered in the system with critical, local information.

community and our folks can be alert system to stay in the know.

According to James Dill, prepared in the event of an emer-

Though not everyone who works on base resides in Coffee County, Dill asks that all Arnold personnel sign up and take "This is another way the advantage of the Hyper-Reach

spread out into multiple counties," he said. "However, this system will inform everyone of what's going on in Coffee County, whether they live here or not."

Those interested in sign-

"I understand that our em- ing up can do so by visiting the gency situation in the area," he ployees, in all categories, are following link: https://signup. hyper-reach.com/hyper reach/ $sign_up_page_2/?id=81681.$ More information is available at the Coffee County Emergency Management Agency's Facebook page.

Tips for telework success

By Jessica Brown

92nd Air Refueling Wing Public Affairs

FAIRCHILD AIR FORCE BASE, **Wash.** – The Air Force has elevated its Health Protection Condition in response to the fast spread of Coronavirus 2019; in response, Airmen, civilians and families are encouraged to practice prevention measures.

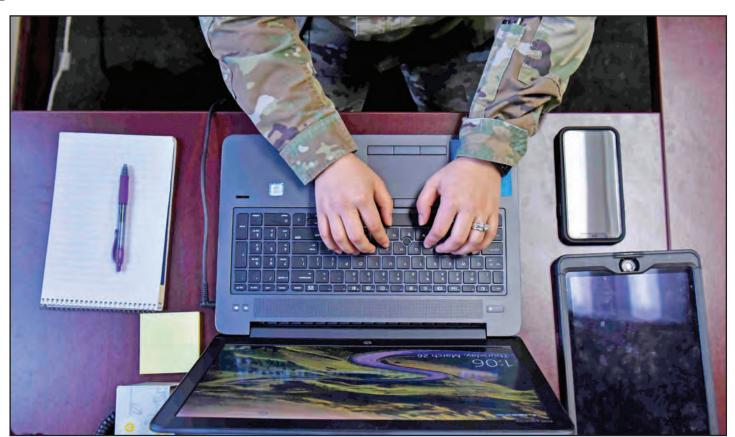
In addition to following strict personal and environmental hygiene, social distancing, staying home if sick, and self-quarantining if exposed to those with COVID-19 symptoms (coughing, fever, shortness of breath), teleworking when possible has been highly encouraged in both the civilian and military sectors.

If you find yourself teleworking in the following weeks as a result, you may discover it is harder than you first imagined (especially if you have little kiddos!)

Sure, scrolling social apps in your pajamas with a bowl of cereal on your stomach may sound like the way to go, but if you're not careful you can find valuable time lost, poor quality products and/or missed meetings.

Read on for a few tips that can help you be successful while teleworking, and things to keep in mind if you are also taking care of your kids:

Set a morning alarm, shower and get dressed - keeping a daily routine



A U.S. Air Force member teleworks from home to practice social distancing. Staying home if sick, and self-quarantining if exposed to those with COVID-19 symptoms (coughing, fever, shortness of breath), and teleworking when possible has been highly encouraged in both the civilian and military sectors. (U.S. Air Force photo by Airman 1st Class Kiaundra

similar to your typical workday will 2. Communicate, help you stay on track and make it easier to return to business once you physically return to work.

- communicate the old saying, "out of sight, out of mind" may be true if your coworker, supervisor or leaders are dealing with issues or a crisis such as COVID-19. During a crisis, certain things take priority for commanders. This doesn't mean what you do isn't important, so continue to provide 2. reports and recommendations. Your insight could help save taxpayer dollars, solve a shortage problem, or even save a life.
- Keep the lines of communication open both up AND down your chain. Teleworking can be lonely, but it doesn't have to be. Pick up the phone, initiate a video conference to check 3. Avoid multitasking - most parents on one another and share updates on your projects.
- 4. Do the work even with meetings postponed, information is still critical to advise your leaders. If you know that your unit's daily meeting is cancelled, you can still send the information you would normally provide. Not only does this show initiative, it keeps the communication channels open, and may provide critical information to your organization.
- 5. Take breaks just as you would do at your work place, take breaks while teleworking. Step outside for some fresh Spokane-air (while maintaining six feet of personal space!) and stretch your legs.
- 6. Prepare for success today and tomorrow - as you're wrapping up your day, set aside 5-10 minutes 5. Take breaks – schedule virtual "play to outline work for yourself to accomplish the next day. Make sure you have planned enough work to keep yourself busy. Will you need clients' information? That case to 6. Keep calm, breathe, recognize review? This will save you from constantly asking your coworkers in the office to email you files. Your opportunity to telework should not be more work for them.
- 7. Communicate your plan to your supervisor with an estimated timeline and seek support if you need additional information or resources.
- 8. Make sure your laptop is charged, programs are up to date and your equipment is out of reach from tiny hands.
- 9. Prepare healthy snacks for tomorrow so when the hunger pangs strikes, you have healthy brain food ready to eat.

Additionally, below are tips for maintaining a balance between parenting and Hopefully these tips will help you telecompleting your teleworking tasks.

- communicate, 1. Establish a routine if your children attend childcare or school, chances are they are used to some kind of routine. Try to establish one quickly; by having a similar routine, it will help them transition back to school/ daycare.
 - Distractions as any parent knows, with children there will be distractions from work. Little Johnny will likely pull down the sack of flour or Sally will need help going to the bathroom. Don't worry. Rapid Mobility will not cease because you had to take a break to clean up a mess.
 - know that multitasking is a critical skill to have while raising children. Many mothers have nursed while typing emails. Many fathers have juggled a baby and groceries. It isn't necessary to complete all tasks at the same time. If you have to step away from a conference call to care for little Johnny, apply the mute button and take care of your child.
 - 4. Delegate if little Johnny and Sally are old enough, delegate certain things to them. Explain that since you're staying home to prevent others from getting sick, you're going to need their big-kid support. Have them take their dishes to the sink, wipe up their mess, get dressed and even put up their toys.
 - dates" during your lunch, take snack breaks with the kids and give your mind a break.
 - your stress there's nothing like participating in a teleconference, typing notes and feeding a screaming toddler all at the same time. When multitasking has to happen, a certain level of stress can affect you. It's important to remain calm, take a deep breath, recognize that you are stressed and then manage the situation by handling each piece individually. Put out the biggest "fire" first. This might very well be the screaming toddler.

Our installations have assumed a mission sustainment posture that best balances the Air Force's number one priority – the safety of you and your families - with necessary mission requirements. work with success.

AFMC to host virtual STEM hiring event

By Marisa Alia-Novobilski

Air Force Materiel Command Public Affairs

FORCE BASE, Ohio – The Air Force Materiel Command will host an online, virtual STEM hiring fair April 23, 9 a.m. to 3 p.m. CT, to fill multiple science, technology, engineering and mathematics positions across the enterprise.

The event will provide an opportunity for hiring officials and qualified candidates to connect directly via an interactive, online platform to fill immediate, critical vacancies as well as future positions at

across the U.S.

"This event builds on the success WRIGHT-PATTERSON AIR of the virtual hiring events AFMC has held over the past year to fill vacancies across the command," said Jesus I. Diaz, Marketing and Branding Manager, Talent Acquisition, Air Force Personnel Center. "This particular event is focused on filling science and engineering positions at AFMC while enabling recruitment from a widespread, geographically dispersed pool of talent."

> Open positions include occupations such as aerospace engineer, computer engineer, computer scientist, IT specialist, operations research, test and evaluation

AFMC headquarters and center locations engineer, systems engineer and more. A transcripts and other, depending on the job full list of professions can be found at the Air Force Civilian Service STEM Virtual Event website.

> "AFMC is looking to fill immediate as well as future needs through this event," said Diaz. "Registration is required, and we encourage all interested candidates to make sure to visit the event site prior to the deadline to submit the required documents."

> Pre-event registration at the official event website, www.afciviliancareers. com/STEMVIRTUAL, is required, with a deadline of April 9 at 11:59 p.m. Applicants will need to upload documents that include a resume, official/unofficial

posting requirement.

All resumes will be reviewed by hiring official prior to the event, and invitations will be extended to a limited number of qualified candidates to attend. While all registrants will not receive an event invitation, their resumes will be maintained for potential future hiring needs.

To learn more about Air Force civilian opportunities and future hiring events, visit www.afciviliancareers.com. Further information on the April 23 event is available at www.afciviliancareers.com/ STEMVIRTUAL.

How the AF Employee Assistance Program can help during COVID-19

By Airman 1st Class Donaldson

14th Flying Training Wing

COLUMBUS AIR FORCE BASE,

Miss. – To help relieve some of the worries people may have as a result of the COVID-19 pandemic, the Air Force Employee Assistance Program's resources continue to be available for those that need them.

According to William Sherman, 14th Flying Training Wing community support coordinator, the program provides a variety of needs from one-on-one coun-

seling sessions with a licensed, credentialed master's degree professional who can address significant challenges such as coping with stress from COVID-19 and prevention and treatment, Sherman said.

EAP is accessible 24/7 by all Air Force civilian personnel (APF and NAF), Guard/Reserve and family members.

"As active-duty personnel, you have all kinds of helping agencies," said Sherman, who is the main point of contact at Columbus Air Force Base, Mississippi,

program and the services provided.

"There are a lot of civilians who are not prior military or retirees on base,' he said. "This is a program to help them be provided with the same services you would have access to."

Sherman said the Air Force EAP offers a variety of amenities to meet the essentials of everyone - including online tips, checklists, in-depth articles, live and on-demand webinars, discussion groups, a health encyclopedia and more.

when people have questions about the Program was made to offer guidance and

relief to those who have anxiety during times like these," Sherman said. "It will continue to provide services during the COVID-19 outbreak and can be utilized at home for those employees currently teleworking."

For more information or questions about the Air Force EAP call Sherman at 662-434-1617.

To access the Air Force EAP website, "The Air Force Employee Assistance go to www.AFPC.AF.MIL/EAP or call 1-866-580-9078.

Suicide Awareness: What you can do to help

By AEDC Safety

This past December there was a class at Arnold Air Force Base titled "Mental Health First Aid." Several AEDC team members attended the class to learn what to look for and how to help someone who • exhibits clues that they might hurt themselves. This is some of what we learned.

According to the Centers for Disease Control and Prevention, suicide is the 10th leading cause of death In the United States. Each day approximately 123 people • take their own lives. That includes approximately 22 U.S. Military veterans and one active service person. The Centers for • Talking about being a burden to others Disease Control and Prevention also reports that the suicide rate has increased by 33 percent in the U.S. since 1999, and suicide is the second leading cause of death among people 10 to 34 years old.

The CDC National Center for Health Statistics reports that the suicide rate peaks in the spring and the fall. Suicide remains a major public health problem, one that occurs throughout the year. In addition, more than 374,000 people are treated in emergency departments for self-inflicted injuries.

It seems that admitting that there's a problem can, for some, can be the toughest part of the battle. The stigma associated with mental health issues and PTSD (Post-Traumatic Stress Disorder) overtakes the need to ask for help. Instead of reaching out and talking about the problem, people are choosing to end their lives to find relief.

Sebastian Junger is an author who spent a year embedded with a platoon in the Korengal Valley, which is billed as the deadliest valley in Afghanistan. In his book "Tribe," his perspective is that, "Soldiers in combat ignore differences of race, religion and politics within their platoon... And then come home to find themselves missing the incredibly intimate bonds of platoon life. The loss of closeness that comes at the end of deployment may explain the high rates of post-traumatic stress disorder suffered by military veterans today."

Warning Signs and Actions to Take

The National Council for Behavioral Health provides a list of clues and actions to take to help you tell if someone is feeling suicidal.

Warnings:

- Talking about wanting to die or kill oneself
- Talking, writing, or posting on social media thoughts on death, dying, or
- Looking for ways to commit suicide: seeking access to pills, weapons, or other means
- Talking about feeling hopeless or

having no purpose

- Acting anxious, agitated, rage, anger, seeking revenge
- Talking about feeling trapped with no way out or being in unbearable pain
- Acting recklessly or engaging in risky activities, seemingly without thinking
- Increasing alcohol or drug use
- Withdrawing from friends, family, or society
- Sleeping too much or too little
- Dramatic changes in mood

Actions:

- · Asses for risk of suicide or harm
- Listen nonjudgmentally
- Give reassurance and information
- Encourage appropriate professional
- Encourage self-help and other support strategies

If you think they may be considering hurting themselves ask them directly, are you thinking about suicide or hurting

If the answer is no, keep listening and sup-porting.

If the answer is yes, ask do you have a plan? How - When? Do you have what it takes? If they answer yes to these questions, call 911 and get help immediately.

If you are unsure about what to do or if you wonder about someone, ask them directly or go to HR, your supervisor or a trusted friend. Sometimes there are no clues and we do not know to help, but do not miss an opportunity to help when you suspect a problem.

If you or someone you know needs help, the Veterans Crisis Hotline is staffed 24 hours a day, seven days a week, at 1-800-273-8255, press 1. Services also are available online at www.veteranscrisisline.net or by text at 838255.

This February, Gen. Arnold W. Bunch Jr., commander, Air Force Material Command, visited Arnold AFB and during the visit he encouraged us to "be deliberate in building relationships and team cohesion to take care of each other." So as we go about our daily business take the time to look, listen, and take care of each other

If you observe an unsafe action or condition that needs immediate attention (i.e., one that creates immediate danger to life or health), call the AEDC Safety Hotline, 454-7233 (S-A-F-E). This number rings in the AEDC Safety Office on weekdays during business hours. The AEDC Operations Center answers calls at night, on weekends and after the fourth ring during regular duty hours.

Take care of each other.



For the latest information from the Air Force on COVID-19 visit: https://www.af.mil/News/Coronavirus-Disease-2019/

AFMC Connect

HOWNLOAD THE USAF CONNECT APP

FOLLOW AIR FORCE MATERIEL COMMAND ON FACEBOOK

OneSource, family and spouse programs still available

By Department of Defense

ARLINGTON, Va. (AFNS) – The Department of Defense is closely monitoring the impact of the new coronavirus on service members, their families and survivors. Resources offered through Military OneSource, the Military and Family Life Counseling program and the Spouse Education and Career Opportunities program continue to serve the military community.

"We are working hard to provide timely and accurate updates and helpful resources for our service members and their families," said Kim Joiner, deputy assistant secretary of defense for military community and family policy. "Our families can feel

confident about finding official information and guidance on our websites and social media platforms. While we have made necessary changes in response to this pandemic, one thing remains the same - our commitment to serving our military community."

What's new

- · A dedicated section is available on Military OneSource to service members and their families informed about the impacts of COVID-19 on military community.
- Beginning March 24, Military OneSource will offer nonmedical video counseling for children and youth who may feel overwhelmed by the

COVID-19

Military OneSource will be live on Facebook Monday through Friday at noon EST to highlight available resources. All videos will be available for on-demand viewing.

What's the Same

- Military OneSource is available 24/7/365 to help service members and their families stress and manage challenges related to COVID-19, as well as provide nonmedical counseling and support. Call 800-342-9647 or connect via live chat.
- Military OneSource specialty consultations, such as relationship support, new MilParent support, health

wellness coaching and more.

- Financial counseling and MilTax services.
- Language services. including real-time interpretation translation services.
- Access to resilience including tools, CoachHub, Moodhacker and Love Every Day.
- Access to the MWR Digital Library including education and entertainment resources.
- SECO career coaches remain available. Call 800-342-9647 or connect through live chat to schedule an appointment.
- Online SECO tools and resources remain available, including My

Occupations Tool, the Scholarship Finder. the College Scorecard Tool, MySECO Resume Builder, and more.

 SECO online events and webinars are still active, including the Military Spouse Employment Partnership Partner Connect discussion and the Virtual Military Spouse Symposium.

What's Changed

Nonmedical Counseling: While Military One-Source continues to offer non-medical counseling by telephone (800-342-9647) and online via secure chat and video, in-person counseling may be affected or unavailable depending on

Individual Career Plan, state and local policies. or MyICP, the Research Families are encouraged to check with their local providers to confirm.

> Military OneSource, a DOD-funded program, is both a call center and website that provides comprehensive information, support and resources on every aspect of military life. Service members and the immediate family of active duty, National Guard and Reserve (regardless of activation status), survivors and DOD expeditionary civilians are eligible for Military OneSource. Veterans and their immediate family members are eligible for Military One-Source up to 365 days postseparation or retirement. All services are available at no cost.

CID encourages vigilance to prevent COVID-19 cyber scams

By U.S. Army Criminal Investigation **Command Public Affairs**

QUANTICO, Va. - During this time of heightened awareness and protection against potential health risks associated with COVID-19, there is also an increased risk in scam methods • blogcoronacl.canalcero.digital used by cybercriminals.

The U.S. Army Criminal In- • coronavirus-realtime.com vestigation Command warns the military community that some phishing campaigns prey on would-be victims' fear, while others capitalize on the opportunity created by hot topics in the news cycle. The COVID-19 Pandemic presents cybercrimi-

Most recently, the Johns Hopkins University COVID-19 interactive map has been hacked individuals should be suspiby cybercriminals. The hackers are selling copies of the interactive map as a malware tool used to steal passwords and

A significant number of additional coronavirus-related domains have been registered. CID officials warn users to not open attachments or links in emails

coming from such domains.

Below is a list of websites that have recently shown signs of malicious behavior detected by anti-virus software:

- coronavirusstatus.space
- coronavirus-map.com
- · coronavirus.zone
- · coronavirus.app
- bgvfr.coronavirusaware.xyz
- coronavirusaware.xyz

Army CID Special Agents are reminding people to be alert and suspicious and take extra steps to verify information benals with a way to combine both fore agreeing to anything putting into a dangerous one-two punch. that could put one's personal or financial information at risk.

> According to CID officials, cious of anyone who approaches or initiates contact regarding coronavirus; anyone not known, or with whom conversation was not initiated, who offers advice on prevention, protection or |recovery - especially if they ask for money. Cybercriminals may use a variety of approaches.

Below is a potential list of



approaches that could be used:

- Someone claims to represent the health department who emails you or comes to your door and tells you of the risks of COVID-19 and offers you vaccination or other testing. The health department will not do this. This is a dangerous scam. If this happens, call your police department immediately.
- Someone claiming to be from your bank or an investment firm who you do not already have a relationship with, who offers investment alternatives to protect you from economic

and market uncertainties.

- · Someone who threatens you with repercussions (arrest, prosecution, confinement) if you don't pay a fee.
- Someone claiming to be from a hospital where a loved one is being treated for the virus but is in urgent need of money before lifesaving treatments can be rendered.
- Someone claiming to be your friend who is stuck in a foreign country and can't get home unless a "virus prevention" or other outrageous sounding fee
- Unsolicited emails offering expert advice or information. or the links in the email malware.
- Someone asking for any personally identifiable information, bank account about family information members.
- computer support who tells you your computer is infected with corona virus and offers

to repair it. Your computer cannot be infected by corona

CID officials also remind individuals to remain vigilant and take precautions against cyber scams. They also recommended to always use trusted sources; avoid clicking on links in unsolicited emails, IMs, or texts; avoid opening attachments in unsolicited emails; do not reveal personal or financial information in email, IMs, or texts; and verify a charity's authenticity before making donations.

Additional information on COVID-19 – progression, transmission, symptoms, treatment They could contain malware - may be found at reputable websites for the Centers for Discould take you to a site with ease Control and Prevention, World Health Organization, The U.S. Department of Health and Human Services, U.S. Food and Drug Administration, the or financial information, or U.S. Government's Corona Virus website, your state, county or city health department, Someone claiming to be from your local hospital, your primary care physician, the local free clinic or wherever you receive medical services.

AFIMSC innovation project receives \$3 million award

By Shannon Carabajal

AFIMSC Public Affairs

JOINT BASE SAN ANTONIO-**LACKLAND**, **Texas** – The Air Force presented a \$3 million Small Business Innovation Research program award to an Air Force Installation and Mission Support Center innovation project March 12.

The project uses drones and machine learning to revolutionize how the Air Force Civil Engineer Center collects data for its environmental mission. The initiative is powered by a partnership between AFIMSC, Air Force Innovation Hub Network (AFWERX) and Aerial Applications, a small business providing drone services and mapping software.

"This speaks to the ability we have to commit and work with a company," said Dr. Will Roper, assistant secretary of the Air Force for acquisition, technology and logistics, in announcing the award. "The stakes couldn't be higher and (this award) shows the type of agility and flexibility we have in the Air Force."

The award represents AFIMSC's first innovation partnership.

"We've achieved tremendous success very quickly, which could not have been possible without teammates who work well together," said Marc Vandeveer, AFIMSC chief innovation officer. The innovation office stood up in November 2018, and the drone project was one of

the first innovation initiatives the office pursued.

The SBIR award is part of the dual-use program encouraging small businesses to complete innovative federal research and development with the goal of creating scalable solutions with potential to benefit both the government and private industry. The competitive, awards-based program also provides the incentive to profit from commercialization.

The award, presented to Aerial Applications, brings the amount of government investments to \$6 million over four years. Aerial Applications also secured \$50 million in funding from industry and venture capitalists, raising the total investment to \$56 million.

"The fact that this project won the award is a testament to the Air Force's renewed focus on innovation and moving our capabilities forward with strong commercial partnerships and powerful execution of our dollars," said Emilie Miller, a project manager in the AFIMSC Innovation Office.

AFIMSC and Aerial Applications began field testing the project last fall, flying an unmanned aerial system equipped with light detection and ranging, multispectral sensors and machine-learning algorithms to map, survey and inventory habitat for the golden-cheeked warbler at Camp Bullis, Texas.

Additional field tests at Camp Bullis lation and mission support requirements



Ethan Jacobs, unmanned aerial system engineer, launches a UAS during a field test Sept. 4 at Camp Bullis, Texas. The UAS was equipped with Light Detection and Ranging, multi-spectral sensors and machine-learning algorithms to map, survey and inventory habitat for the golden-cheeked warbler. The field test will help the Air Force determine if UAS technology can characterize habitat better, faster and cheaper than current methods. (U.S. Air Force photo by Malcolm McClendon)

are planned for late March. The initial project will expand to include other species and will be applied to more than 20 different uses in at least 12 locations, according to Vandeveer.

With the SBIR award and additional funding, Miller believes the technology will eventually be applied to many instal-

outside of environmental management.

"Through our strategic partnership with Aerial Applications and their capabilities, we're looking forward to proving this technology's value and scalability across the Air Force," she said. "We're so excited. We have shown we can accomplish amazing things through perseverance, go-getter attitudes and making connections to find the right path forward."

AFRL, associates improve processes for fabricating aircraft engine inlet ducts

By Donna Lindner

Air Force Research Laboratory

WRIGHT-PATTERSON AIR FORCE BASE, Ohio – Aircraft engine inlet ducts provide the engine compressor with a constant supply of air to prevent the compressor from stalling. Since the inlet is directly exposed to the impacting airflow, it must create as little drag as possible. The smallest gap in airflow supply can cause major engine problems as well as significant efficiency losses.

Part of the Air Force 2030 Science and Technology strategy includes the deployment of low cost Unmanned Aerial Systems in mass to assist in future near peer engagements. In order to realize this vision, new manufacturing strategies need to be identified which can support the rapid manufacturing of high quality aerospace components at costs that are lower than what are currently available using legacy manufacturing processes.

If the inlet duct is to retain its function of providing sufficient air with minimum turbulence, it must be clean and flawless.

The Air Force Research Laboratory's Manufacturing and Industrial Technologies Division and the contractor team of Cornerstone Research Group, A&P Technology and Spintech LLC, conducted research to quantify the benefits of replacing legacy manufacturing processes with novel processes for the fabrication of an 11-foot long, S-shaped engine inlet duct.

The legacy fabrication process for the inlet duct consists of composite material preimpregnated with a synthetic resin, applied by hand, to a multi-piece steel mandrel. The mandrel is packaged and placed in an autoclave for processing. An autoclave is essentially a heated pressure vessel which supplies heat to activate resin curing and pressure to ensure there is minimal absorbency in the fully cured composite part.

The approach replaces the hand applied composite prepreg with an automated overbraid process which applies dry fiber to a mandrel. The very heavy multi-piece steel mandrel was replaced with a lightweight single-piece shape-memory polymer mandrel and the dry braided carbon



The Kratos XQ-58 Valkyrie is an experimental stealthy unmanned combat aerial vehicle designed and built by Kratos Defense & Security Solutions for the United States Air Force Low Cost Attritable Strike Demonstrator program, under the USAF Research Laboratory's Low Cost Attritable Aircraft Technology project portfolio. (Courtesy photo)

molding process.

One of the primary goals of this program is to understand part cost and production time benefits from introducing the new tooling and processing solutions.

The team completed element analysis finalization of the overbraid architecture, fabrication of a shape memory polymer forming tool and construction of the SMP mandrel that will serve as the tool during the preform overbraid process.

Because of inlet duct geometrical complexity, multiple iterations were necessary to optimize the overbraid machine settings and thus minimize composite material wrinkling. A total of four inlet ducts will be fabricated and legacy part cost and production time will be compared to the new design.

"We believe that the introduction of a reusable shape memory polymer mandrel together with the automated overbraid process and an oven based VARTM composite cure will lead to significant cost and cycle time reductions," said Mr. Craig Neslen, manufacturing lead for the Low Cost Attritable Aircraft Technology Initiative in the Manufacturing and Industrial Technologies Division. "Quantifying

fiber was processed with a low cost epoxy the manufacturing benefits and validatresin using a vacuum assisted resin transfer ing structural integrity will be critical to establishing a positive business case and convincing designers and manufacturers that the new materials and processes should be incorporated into future low cost engine inlet duct designs."

> The final inlet duct will be delivered to the government for further integration into the Aerospace System's Directorate's complementary airframe design and manufacturing program. Personnel at the Aerospace Vehicles Division will conduct static ground testing of the integrated braided fuselage and inlet duct structure.

> "While we have yet to define all of the implications of attrition tolerance on design criteria and the resulting manufacturing materials and processes utilized, we do have a baseline with threshold requirements for strength and stiffness which we

will assess via full-scale airframe ground tests," said Ray Fisher, aerospace engineer in the Aerospace Vehicles Division.

The Air Force Research Laboratory (AFRL) is the primary scientific research and development center for the Air Force. AFRL plays an integral role in leading the discovery, development, and integration of affordable warfighting technologies for our air, space, and cyberspace force. With a workforce of more than 11,000 across nine technology areas and 40 other operations across the globe, AFRL provides a diverse portfolio of science and technology ranging from fundamental to advanced research and technology development. For more information, visit: www.afresearchlab.com.



An 11-foot long unmanned aircraft system inlet duct preform is shown prior to resin infusion. (Courtesy photo)



Arnold AFB Fire and Emergency Services conducts live fire training

By Jill Pickett

AEDC Public Affairs

Over the course of two weeks in late February and early March, the Arnold Air Force Base Fire and Emergency Services personnel trained using structure and aircraft live fire simula-

Live fire training is important for FES team members in order to maintain readiness. The simulators use propane and simulate smoke, which allows crews to quickly reset and cycle team members repeatable through scenarios.



Arnold Air Force Base Fire and Emergency Services personnel attack an aircraft fire with a hand line as they train March 5 on aircraft rescue and firefighting techniques using a propane-fueled trainer brought to the base. The aircraft trainer can simulate fires in multiple locations - cabin, ground, engine, wheel and brake, and the auxiliary power unit. (U.S. Air Force photos by Jill Pickett)



engine fire with a hand line while training March 5 using a propane-fueled trainer turret on an aircraft firefighting vehicle to battle a blaze while training March 5 on brought to the base. The simulator, which was brought in to facilitate training, uses liquid and vapor propane to create controlled and repeatable fire scenarios.



Arnold Air Force Base Fire and Emergency Services personnel attack an aircraft Arnold Air Force Base Fire and Emergency Services personnel use the roof aircraft rescue and firefighting techniques at the fire crew's training area on base.



Arnold Air Force Base Fire and Emergency Services personnel attack a ground fire near an aircraft with a hand line while training March 5 using a propane-fueled trainer brought to the base. The aircraft trainer uses propane to generate controlled fires in various locations in and around the mock fuselage.



Arnold Air Force Base Fire and Emergency Services personnel enter a live fire trainer Feb. 25 at Arnold AFB during a training exercise. The trainer is a mobile trailer brought to the base for training. It uses propane for the fuel and simulated smoke, providing a more controllable situation for training.



Arnold Air Force Base Fire and Emergency Services personnel attack a fire using vehicle-mounted nozzles while training March 5 on aircraft rescue and firefighting techniques at a training area on base.

Arnold AFB Milestones



Roy Carroll, TOS 40 Years

40 YEARSCharles Cardwell, TOS
Roy Carroll, TOS
Mark Echols, AF



Gary Clower, TOS 35 Years

35 YEARS
Gary Clower, TOS
Troy Davis, TOS
Timothy Emerton, TOS



Joel Shaver, TOS 35 Years

Roger Miller, TOS Michael Reep, TOS Joel Shaver, TOS

30 YEARSJared Smith, TOS Harold Turrentine, TOS

25 YEARS
Bryan Petty, TOS
Mitch Swafford, TOS

20 YEARSBradley Mcneese, TOS

Bradley Mcneese, TOS Christoper Mears, TOS

15 YEARS

David Brown, TOS
Phillip Buckner, TOS
Charles Rose, TOS
Lutrell Stuart, TOS
Austin Voorhes, TOS
James Wiser, TOS
Meliton Abenojar, TOS

5 YEARS

Meliton Abenojar, TOS
Drew Barnett, TOS
Paul Cox, TOS
Chard Hartman, TOS
Robert Huffer, TOS
John McDonald, TOS
Troy Morrison, TOS
Donald Parker, TOS
Thomas Redmon, TOS

Michael Skyles, TOS INBOUND MILITARY

Maj. Stephen Satava, AF Master Sgt. Adam Whitehurst, AF

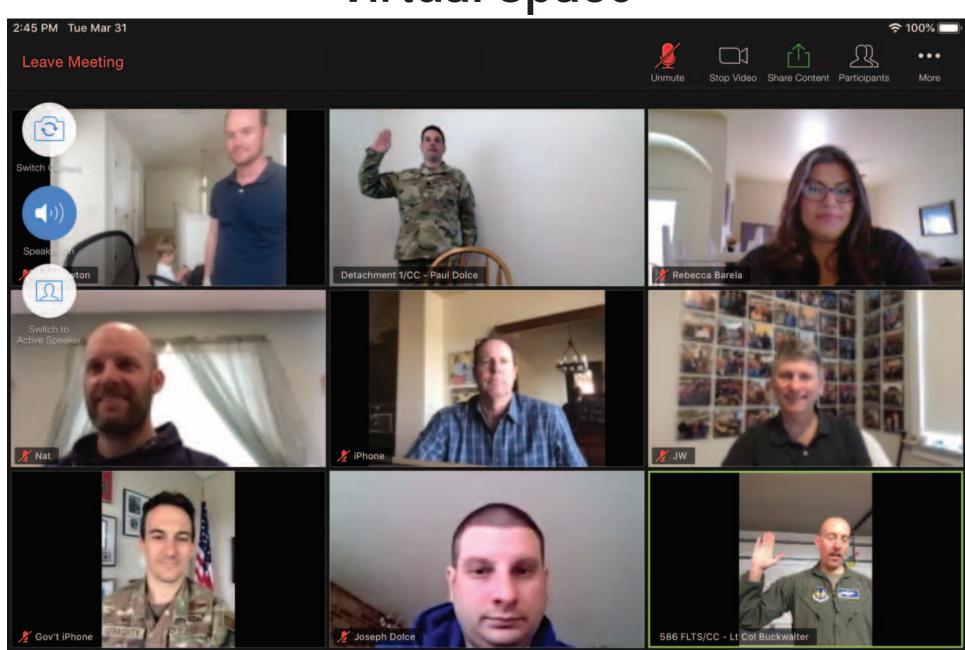
RETIREMENTS

Thomas Allen, TOS James Gilliam, TOS Roma Rojas, AF

NEW HIRES

Matthew Brewer, TOS Aleshia Brooks, AF Rachel Chumley, TOS Ryan Crawford, TOS Christian Dale, AF Ancie Dotson III, TOS Kelsey Felver, AF Billy Housley, TOS Imani Mason, TOS Caila Singleton, TOS Michael White Jr., TOS

Dolce celebrates promotion in virtual space



During a pandemic, when a member of the 586th Flight Test Squadron at Holloman Air Force Base, New Mexico, was scheduled to be promoted they stepped up to uphold military traditions – virtually. Lt. Col. Paul Dolce, commander of the 586 FLTS, Detachment 1, is promoted March 31 during a promotion held virtually with the officiating officer Lt. Col. Hans Buckwalter and Dolce in different locations to maintain social distancing. The normal audience of friends, family and co-workers was replaced by a screen full of people in both their on-base and home offices. (U.S. Air Force photo) (This image has been altered by obscuring a phone number for security purposes.



Dump Trailers

Have a BIG project? Got more than will fit in a bin?



Call Recycling and they will drop off for you to fill up. Then call when finished and they'll pick it up. FOR ON BASE USE ONLY 454-6068



Thank You from The Green Team
David Miller (manager), Bud Schell, Ty Addington
931-454-6068



Ribbon cut on Tenn. Dept. of Veterans Services field office at Arnold AFB

By Bradley Hicks

AEDC Public Affairs

An office providing resources and guidance to help ensure area veterans receive the benefits to which they are entitled officially opened March 12 at Arnold Air Force Base.

State and local officials, joined by base personnel, cut the ribbon on the new Tennessee Department of Veterans Services Tullahoma Field Office during a ceremony outside the Arnold AFB Medical Aid Station.

The new TDVS office, located within the Medical Aid Station at Arnold, is in place to provide veterans with help on their benefits, advocacy and other assistance.

Courtney Rogers, TDVS commissioner, said the office falls in line with Gov. Bill Lee's vision of providing better support to veterans in rural communities across the state. Lee worked with TDVS Regional Director Steve Bell, who identified the Tullahoma area as an ideal location to help meet Lee's objective.

to thank Gov. Lee for his vision to support Tennessee's rural communities - we want veterans across the state to have support in claiming the benefits they have earned through service," Rogers said. "I would also like to thank the state legislature for their ongoing support of Tennessee's veterans and family members and for

communities."

Representatives with Arnold. the TDVS approached Arfall to propose that Arnold host a new office. Following discussions with Col. Complex Test Support Division chief, and Master Sgt. Joshua Suggs, Arnold AFB Medical Aid Station moved forward with es-Arnold, the headquarters of AEDC. Existing space in the medical building was

fice will provide greater service. convenience to these pato meet with the TDVS at the same site to discuss benefits specific to the state a.m. and 4:30 p.m. CDT. of Tennessee.

"Today, I would like tionship with the VA, we realized hosting the Department of Veterans Services would be very complementary to the VA services provided to local veterans," Roberts said. "Actually, getting a formalized relationship was simple since we already worked similar agreements and they already had personnel ready to work in our facility."

During the ceremony, advantage of the services

enabling us to hire support Roberts expressed his apstaff to assist these rural preciation to the TDVS for bringing the office to

"Thank you for giving nold AFB personnel last us the opportunity to host the Tennessee Department of Veterans Services in this facility," he said. "This Charles Roberts, Arnold is a great partnership, and Engineering Development I am excited to provide a landing place for services for our veteran community."

The office at Arnold Branch chief, the TDVS will be manned by TDVS Veterans Resource Cotablishing the new office at ordinator Michael Rinck who, as a 24-year military veteran himself, said he appreciates the sacrifices converted to make room for each veteran has made. In his role, Rinck will con-Roberts said approx- nect veterans, transitioning imately 1,200 Veterans service members and fami-Affairs patients are seen lies with the federal and in the on-base VA office. state benefits they have He added the new of- earned through military

The field office is tients, as they will be able located at 225 von Kármán Road, Building 225, Room 124 on Arnold AFB. To disability compensation, schedule an appointment, health care eligibility and call 931-461-7169 Monday other veteran services and through Friday between 8

In addition to his of-"With our current rela-fice at Arnold, Rinck has mobile responsibilities for the TDVS. He will be in Grundy County the first Thursday of each month and located at the Coffee County Lannom Library in Tullahoma on the third Thursday of each month. These mobile offices may be more convenient for veterans living in areas around Arnold AFB and will allow them to take



Arnold Engineering Development Complex team members, Tennessee Department of Veterans Services representatives and community leaders assist in cutting the ribbon March 12 for the new Tennessee Department of Veterans Services office located in the Medical Aid Station at Arnold Air Force Base. (U.S. Air Force photo by Deidre Moon)



Col. Charles Roberts, chief of the Arnold Engineering Development Complex Test Support Division, speaks to the crowd gathered for the ribbon cutting March 12 for the new Tennessee Department of Veterans Services field office located in the Medical Aid Station at Arnold Air Force Base. (U.S. Air Force photo by Deidre Moon)

offered. Rinck added he accessing the base. also has the flexibility to

Due to the current clomeet with veterans outside sure of the Medical Aid of the Arnold gate at other Station because of the COtimes if there are issues that VID-19 outbreak, Rinck might prevent them from said assistance is currently reopens.

being provided via phone by contacting the number above. In-person appointments will resume once the Medical Aid Station

NAS Women's Day event highlights work of women-led organization that supports area women

By Deidre Moon

NAS Public Affairs

In recognition of International Women's Day and the month of March as Women's History Month, members of National Aerospace Solutions, LLC (NAS) organized an event held on March 13 at Arnold Air Force Base, highlighting the important work of Blue Monarch, a residential recovery program for

women. Jennifer Edmonston, NAS Human Resources Manager, said representatives of Blue Monarch were chosen to speak at this year's event to provide information on the important role that the local, women-led organization plays in the community by giving women who are suffering from hardships the opportunity to get back on their feet.

"Blue Monarch is a nonprofit designed to serve women and children, who are currently recovering from physical, emotional, and/or sexual abuse, alcohol or drug addictions, home. poverty, and mental health issues," Edmonston said. "In my opinion, there is no better way to honor the spirit of International Women's Day and Women's History Month than by giving back to an organization, like Blue Monarch, with the sole purpose of supporting and uplifting women and

"My hope is our employees walk away from today's

their children."

presentation with a better understanding of Blue Monarch's mission and how they can support the organization, if desired."

On behalf of NAS, Edmonston and NAS General Manager Dr. Rich Tighe presented Kate Cataldo, the Operations Director for Blue Monarch, with a check donation in the amount of \$1,500.

Cataldo thanked NAS for the donation along with those in attendance for taking time to support the organization.

"We serve the most dedicated and most courageous women that I have ever met," she said. "Blue Monarch is a ministry that not only treats the symptoms of addiction, but helps heal lives and rebuild families."

Shakia Craig, a resident of Blue Monarch who will be graduating from the program in April, was invited to share her testimony. She mentioned that her life was unstable from the beginning, and at an early age she was abused in her own

"I was excited when I got to go see my Dad because I knew I would be safe there," Craig said.

However, that soon changed, and Craig said she didn't feel she had anyone or anywhere safe to turn. Though she found some solace in sports, Craig mentioned her grades in teering with Blue Monarch school suffered.

because my home life was

so unstable," she said.

At 13, she tried drugs for the first time; and at 15. she got pregnant and moved with the father of her child to New Jersey.

For many years, she moved back and forth from Tennessee to New Jersey, and the cycle of abuse and addiction continued.

In 2015, Craig had twins and decided soon after that she wanted to change her life's path.

"I cried out, 'God there this," she said.

She reached out to Blue Monarch, receiving a spot for herself and her children there in 2018.

"I played the victim a lot at Blue Monarch, and they stood by me," she said. "They showed me that I had to deal with the one person I had been running from...

With the assistance from the devoted Blue Monarch staff and an amazing team of volunteers, Craig said she has become a better mother, taking her kids to church, playing games with them, and having dinners together as a family.

"My story is one of deliverance, development, and destiny," she said. "I am no longer a victim. I am victorious."

If interested in volunor donating to the organiza-"I was a poor student tion, visit: www.bluemon-



has got to be more than National Aerospace Solutions, LLC (NAS) General Manager Dr. Rich Tighe and Human Resources Manager Jennifer Edmonston, at right, present a donation to representatives from Blue Monarch, from left, Shakia Craig, a resident and soon-to-be graduate, and Kate Cataldo, Operations Director, during an event held by NAS recognizing Women's History Month and International Women's Day at Arnold Air Force Base, March 13. (U.S. Air Force photo by Jill Pickett)